

Advanced EDL Materials (AEDLM) Project

Game Changing Development Program | Space Technology Mission Directorate (STMD)



ANTICIPATED BENEFITS

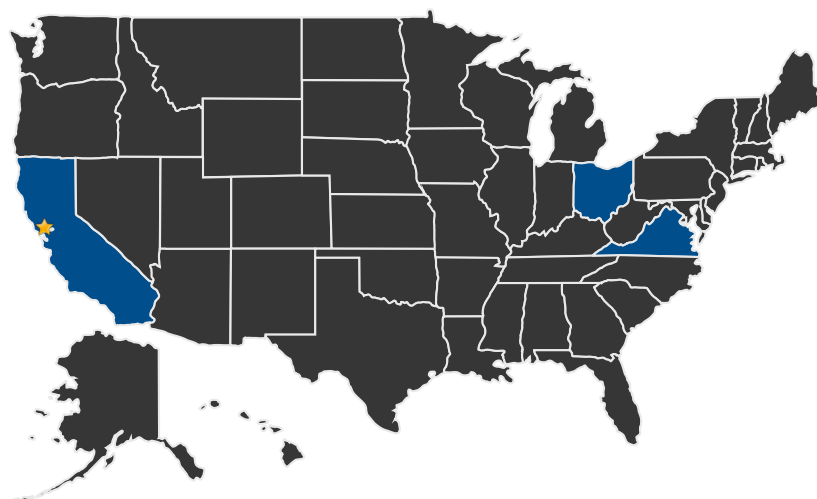
To NASA funded missions:

Flexible TPS investments will directly benefit the HIAD-2 project.

DETAILED DESCRIPTION

Via the exploration of alternate resins and substrate materials for ablative TPS, and the development of new high heat flux resistant flexible TPS systems, we intend to provide existing GCD investments "plug-and-play" options that will greatly increase the likelihood of mission infusion of these key technologies.

U.S. WORK LOCATIONS AND KEY PARTNERS



■ U.S. States With Work
 ★ Lead Center: Ames Research Center

Other Organizations Performing Work:

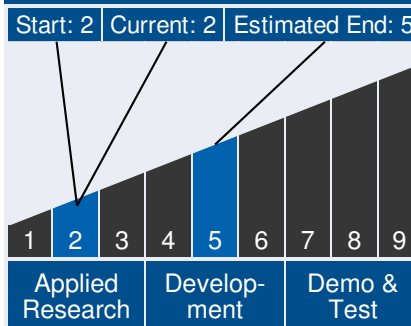
- NASA EPSCOR Students
- US Forestry Service



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Technology Maturity



Management Team

Program Executive:

- Lanetra Tate

Program Manager:

- Mary Wusk

Project Manager:

- Michael Wright

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Contributing Partners:

- ETH-Zurich

Technology Areas

Primary Technology Area:

Entry, Descent, and Landing Systems (TA 9)

- └ Aeroassist and Atmospheric Entry (TA 9.1)
 - └ Thermal Protection Systems for Rigid Decelerators (TA 9.1.1)
 - └ Conformal Ablative Thermal Protection System (TPS) (TA 9.1.1.3)

Secondary Technology Area:

Thermal Management Systems (TA 14)

- └ Thermal Protection Systems (TA 14.3)
 - └ Ascent/Entry TPS (TA 14.3.1)

Entry, Descent, and Landing Systems (TA 9)

- └ Aeroassist and Atmospheric Entry (TA 9.1)
 - └ Thermal Protection Systems for Deployable Decelerators (TA 9.1.2)
 - └ Non-Ablative Concepts for Thermal Protection (TA 9.1.2.1)
- └ Vehicle Systems (TA 9.4)
 - └ Modeling and Simulation (TA 9.4.5)
 - └ Non-Ablative Material Response Models (TA 9.4.5.4)

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Technology Areas (cont.)

Thermal Management
Systems (TA 14)

- └ Thermal Protection
Systems (TA 14.3)

- └ Ascent/Entry TPS (TA
14.3.1)

- └ Rigid Ablative Thermal
Protection Systems (TA
14.3.1.1)

- └ Flexible/Deployable
Thermal Protection
System (TA 14.3.1.3)

- └ Thermal Protection
System Modeling and
Simulation (TA 14.3.2)

- └ Coupled Multi-
Dimensional
Flow/Material

- Response/Thermal/Struct
Analysis (TA 14.3.2.1)

- └ Shock Radiation
Modeling (TA 14.3.2.2)

DETAILS FOR TECHNOLOGY 1
